GENERAL ELECTRICAL NOTES

- 1. MATERIALS, EQUIPMENT, AND SYSTEMS SHALL BE UL LISTED WHEN APPLICABLE AND SHALL MEET ALL PERTINENT REQUIREMENTS OF THE AMERICAN SOCIETY FOR TESTING MATERIALS (ASTM), NATIONAL ELECTRICAL CODES (NEC), THE UNDERWRITERS LABORATORY (UL), THE NATIONAL ELECTRIC MANUFACTURERS ASSOCIATION (NEMA), NATIONAL FIRE PROTECTION ASSOCIATION (NFPA), AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI), AND OTHER NATIONALLY RECOGNIZED AGENCIES AS WELL AS APPLICABLE LOCAL CODES.
- 2. ANYTHING DRAWN OR SPECIFIED SHALL NOT BE CONSTRUED TO CONFLICT WITH ANY LOCAL MUNICIPAL OR STATE LAW, REGULATION OR ORDINANCE WHICH GOVERNS THE INSTALLATION OF ANY ELECTRICAL OR RELATED WORK. ITEMS SHALL NOT BE INSTALLED IN CONFLICT WITH THE NEC OR LOCAL UTILITY. RESOLVE ANY AND ALL CONFLICTS BEFORE INSTALLATION AT NO ADDITIONAL EXPENSE TO THE OWNER.
- 3. THE SYSTEMS SHOWN ON DRAWINGS SHALL BE PROVIDED TO SERVE ALL FIXTURES. EQUIPMENT, AND AREAS WITHIN THE CONTRACT LIMIT LINES AS SET FORTH BY THE ARCHITECTURAL SOLUTION FOR THE PROJECT. THE BIDDING AND CONTRACT REQUIREMENTS, GENERAL REQUIREMENTS, AND GENERAL PROVISIONS SHALL APPLY TO THIS SECTION. SYSTEMS SHALL INCLUDE ALL EQUIPMENT, APPURTENANCES, SAFETY DEVICES AND CONTROLS NECESSARY FOR THE INTENDED SERVICE. PROVIDE ALL LABOR AND MATERIALS FOR A CODE COMPLIANT COMPLETE AND FUNCTIONAL ELECTRICAL SYSTEM FOR THE CONTRACT WORK AREAS INDICATED ON THE ELECTRICAL DRAWINGS.
- 4. WHERE JOB CONDITIONS REQUIRE CHANGES FROM THE CONTRACT DOCUMENTS THAT DO NOT CHANGE THE SCOPE OF INSTALLATION OR NATURE OF WORK REQUIRED, THE CONTRACTOR SHALL MAKE SUCH CHANGES WITHOUT ADDITIONAL COST TO THE OWNER. NO OTHER CHANGES MAY BE MADE WITHOUT WRITTEN PERMISSION OF THE OWNER. PROVIDE ALL CONDUIT OFFSETS AND MISC. MATERIALS REQUIRED TO COORDINATE WITH BUILDING COMPONENTS AND WORK OF OTHER TRADES.
- 5. BIDDERS SHALL BE BONDED AND INSURED AND LICENSED CONTRACTORS IN ACCORDANCE WITH LOCAL AND STATE LAWS AND AS REQUIRED BY OWNER. PROVIDE ALL LABOR AND MATERIALS REQUIRED FOR COMPLETE INSTALLATION OF THE INDICATED SYSTEMS AND EQUIPMENT ACCORDING TO THE NEC AND MANUFACTURER'S RECOMMENDATIONS.
- 6. PROVIDE ALL REMOVALS AND RELOCATION'S AS REQUIRED TO COMPLETE THE NEW WORK.
 7. REMOVE EXISTING CONSTRUCTION TO THE EXTENT REQUIRED TO PROVIDE NEW CONSTRUCTION WORK UNLESS OTHERWISE NOTED.
- 8. PROVIDE EMT CONDUIT AND GALVANIZED BOXES WHERE CONCEALED OR EXPOSED UNLESS NOTED OTHERWISE. PROVIDE EMT WITH COMPRESSION FITTINGS IN EXPOSED EXTERIOR LOCATIONS. ALL CIRCUITS SHALL HAVE AN INSULATED GREEN GROUNDING CONDUCTOR. ALL CONDUCTORS SHALL BE COPPER UNLESS NOTED OTHERWISE. PROVIDE LIQUID TIGHT FLEX WHIP AT MOTORIZED OR MOVABLE EQUIPMENT IN WET AREAS AND OUTDOORS.
- 9. VERIFY FINAL LOCATIONS FOR ROUGH—INS WITH FIELD MEASUREMENTS AND WITH THE REQUIREMENTS OF THE ACTUAL EQUIPMENT TO BE CONNECTED. VERIFY ALL DIMENSIONS BY FIELD MEASUREMENTS.
- 10. COORDINATE THE INSTALLATION OF ELECTRICAL MATERIALS AND EQUIPMENT ABOVE CEILINGS WITH SUSPENSION SYSTEM, MECHANICAL EQUIPMENT AND SYSTEMS, AND STRUCTURAL COMPONENTS. COORDINATE ELECTRICAL EQUIPMENT AND MATERIALS INSTALLATION WITH OTHER BUILDING COMPONENTS. PROVIDE WATER TIGHT BUILDING ENVELOPE AND ROOF PENETRATIONS.
- 11. WHERE MOUNTING HEIGHTS ARE NOT DETAILED OR DIMENSIONED, INSTALL ELECTRICAL SERVICES AND OVERHEAD EQUIPMENT TO PROVIDE THE MAXIMUM HEADROOM POSSIBLE. INSTALL ELECTRICAL EQUIPMENT TO FACILITATE MAINTENANCE AND REPAIR OR REPLACEMENT OF EQUIPMENT. INSTALL ALL WORK CONCEALED IN FINISHED SPACES.
- 12. PROVIDE TYPE WRITTEN PANEL BOARD SCHEDULES AT ALL NEW PANELBOARDS. UPDATE AND PROVIDE TYPE WRITTEN PANELBOARD SCHEDULES AT EXISTING PANELS WHEN NEW CIRCUITS ARE ADDED.
- 13. PORTIONS OF THE WORK ARE BASED ON BUILDING DRAWINGS PREPARED BY OTHERS. CONTRACTOR SHALL VISIT THE PROJECT SITE AND REVIEW ALL DRAWINGS BY OTHER TRADES BEFORE SUBMITTING BID AND SHALL BECOME FAMILIAR WITH THE PROJECT CONDITIONS. THE CONTRACTOR SHALL ADVISE THE ARCHITECT / ENGINEER PRIOR TO BID OF DISCREPANCIES WHICH WILL PROHIBIT THE PREPARATION OF AN ALL—INCLUSIVE BID OR
- 14. FIRE STOP ALL PENETRATIONS OF FIRE—RATED WALLS, CEILINGS, OR FLOOR CONSTRUCTION WITH ROCK WOOL INSULATION OR OTHER UL LISTED PRODUCTS. COMPLETELY SEAL VOIDS WITH FIRE—RATED MATERIALS, FULL THICKNESS OF THE CONSTRUCTION ELEMENTS OR AS INSTRUCTED BY PRODUCT MANUFACTURER. PROVIDE UL LISTED FIRE RATED BOXES FOR RECESSED BOXES IN RATED WALLS AND CEILINGS. FIRE RATED WALLS SHALL INCLUDE ALL CORRIDOR WALLS, STAIRWELLS AND ALL PARTITIONS THAT EXTEND TO UNDERSIDE OF DECK ABOVE. SEE ARCHITECTURAL DRAWINGS FOR RATED PARTITION AND RATED CEILING TYPES.
- 15. ALL CONSTRUCTION, SURFACES, FINISHES, ETC. ALTERED OR EXPOSED BY ANY DEMOLITION, REMOVAL OR INSTALLATION SHALL BE REPAIRED OR REPLACED AS NECESSARY, SYSTEMATICALLY CLEANED, PRIMED, AND FINISHED TO PROVIDE A MATCHING, FINISHED APPEARANCE WITH THE SURROUNDING EXISTING CONDITIONS.
- 16. PRIOR TO START OF ALL WORK, COORDINATE THE REMOVAL, STORAGE AND / OR DISPOSAL OF INCIDENTAL ITEMS NOT PERMANENTLY AFFIXED TO THE BUILDING WITH THE OWNER. OWNER HAS THE RIGHT OF FIRST REFUSAL ON ALL SALVAGE ITEMS.
- 17. ALL MATERIALS SHALL BE AS SPECIFIED OR EQUAL AS APPROVED BY ARCHITECT /
 ENGINEER. SPECIFIC MATERIALS SPECIFIED IS MEANT TO INDICATE QUALITY INTENT WHICH
 WILL BE USED AS A BASIS FOR COMPARISON WITH SUBSTITUTES SUBMITTED FOR
 APPROVAL. THE DECISION AS TO WHAT IS EQUAL IS TO BE DETERMINED BY THE
 ARCHITECT / ENGINEER.
- 18. ALL EXISTING PENETRATIONS WILL BE DOCUMENTED AND REPORTED TO THE COR BY THE END OF THE WORK DAY OR WILL BE THE RESPONSIBILITY OF THE GC TO SEAL AND

BEFORE STARTING ANY PROJECT WORK, SUBMIT A WRITTEN ELECTRICAL SAFETY PLAN TO THE OWNER THAT COMPLIES WITH OSHA AND LATEST NFPA 70E, "ELECTRICAL SAFETY IN THE WORKPLACE". ARRANGE AN ELECTRICAL SAFETY MEETING WITH THE LANDLORD AND OWNER AND DISCUSS ELECTRICAL SAFETY INCLUDING IDENTIFICATION OF HAZARDS AND PROCEDURES FOR DAILY WORK PLANS, MAINTAINING RESTRICTED AND PROHIBITED ACCESS BY QUALIFIED AND UNQUALIFIED PERSONNEL. EACH ATTENDEE SHALL SIGN AN ATTENDANCE SHEET FOR THIS

TRACE ALL EXISTING POWER CIRCUITS THAT ARE RELOCATED, REFED, OR REUSED. UPDATE PANEL SCHEDULES WITH NEW TYPED CIRCUIT DIRECTORIES. INDICATED SOURCE FEED ON DIRECTORY. UPDATE FEEDER PANEL CIRCUIT DIRECTORIES.

UNLESS OTHERWISE REQUIRED BY THE CONNECTED EQUIPMENT

MANUFACTURER OR THE NEC:

MINIMUM CIRCUIT FOR 115V OR 277V SHALL BE 2#12, #12EGC, IN 3/4"C OR MC (WHERE CONCEALED) FED FROM A 1P-15A C/B. SHARED NEUTRALS ARE NOT ACCEPTABLE UNLESS NOTED OTHERWISE. MINIMUM CIRCUIT SIZE FOR 208V/1ø OR 480V/1ø SHALL BE 2#12, #12EGC, IN 3/4"C OR MC (WHERE CONCEALED) FED FROM A 2P-20A C/B. MINIMUM CIRCUIT SIZE FOR 208V/3ø OR 480V/3ø SHALL BE 3#12, #12EGC, IN 3/4"C OR MC (WHERE CONCEALED) FED FROM A 3P-20A C/B. PROVIDE FULL SIZE NEUTRAL CONDUCTOR WHEN NEUTRAL IS INDICATED OR REQUIRED BY CONNECTED EQUIPMENT. PROVIDE AN INSULATED GREEN EQUIPMENT GROUNDING CONDUCTOR (EGC) WITH EACH CIRCUIT. BOND RACEWAY, DISCONNECTS AND PANEL BOXES TO EQUIPMENT GROUNDING CONDUCTOR PER NEC. PROVIDE INSULATED GREEN WITH YELLOW TRACER ISOLATED GROUNDING CONDUCTOR WHERE IG IS CALLED FOR.

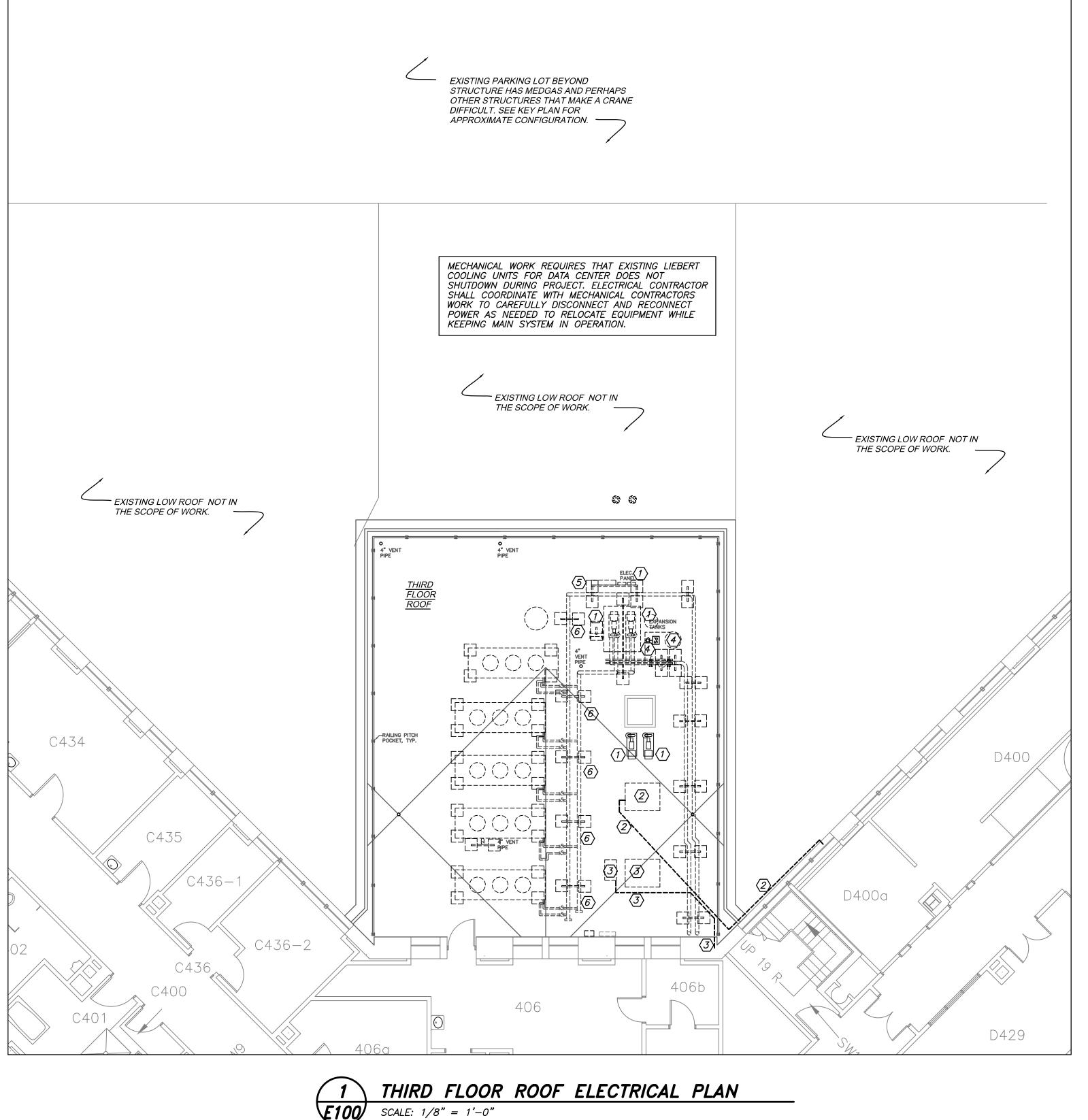
ALL WIRE SIZES ARE BASED ON COPPER CONDUCTORS.
ALUMINUM CONDUCTORS SHALL NOT BE USED UNLESS APPROVED
BY BUILDER AND LOCAL AUTHORITY. PROVIDE THHN/THWN-2
INSULATION FOR GENERAL CONDUCTORS. PROVIDE XHHW-2
INSULATION FOR SERVICE ENTRANCE CONDUCTORS OR AS
REQUIRED BY THE UTILITY COMPANY.

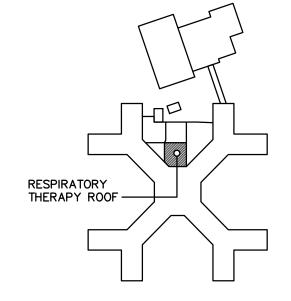
INCREASE CONDUIT SIZE PER THE NEC WHEN THE COMBINATION OF SWITCHING AND POWER CONDUCTORS EXCEED THE CONDUIT CAPACITY. DERATE CONDUCTORS PER NEC WHEN MULTIPLE CIRCUITS ARE RUN IN SAME CONDUIT.

KEYED DRAWINGS NOTES:

- (1) DISCONNECT EXISTING PUMPS FROM DISCONNECTS AND RECONNECT TO NEW PUMPS. DISCONNECT ONE UNIT AT A TIME TO KEEP SYSTEM OPERATING.

 COORDINATE AND SCHEDULE WORK WITH MECHANICAL CONTRACTOR,
- 2 TEMPORARILY DISCONNECT POWER AND CONTROLS FROM REFRIGERANT CONDENSER. UNIT IS TEMPORARILY UNUSED. CONFIRM WITH VA BEFORE STARTING WORK THAT ROOF UNIT IS STILL ABLE TO BE SHUTDOWN AND TEMPORARILY REMOVED. RECONNECT UNIT POWER AND CONTROLS AS SCHEDULED AND COORDINATED WITH MC.
- 3 TEMPORARILY DISCONNECT POWER AND CONTROLS FROM DRY COOLER AND PUMP UNITS. UNIT IS TEMPORARILY UNUSED. CONFIRM WITH VA BEFORE STARTING WORK THAT ROOF UNIT IS STILL ABLE TO BE SHUTDOWN AND TEMPORARILY REMOVED. RECONNECT UNIT POWER AND CONTROLS AS SCHEDULED AND COORDINATED WITH MC.
- 4 DISCONNECT AND RECONNECT POWER TO GLYCOL FILL UNIT AS NEEDED FOR MECHANICAL CONTRACTOR TO RELOCATE UNIT. COORDINATE AND SCHEDULE WORK WITH MECHANICAL CONTRACTOR.
- (5) COORDINATE AND SCHEDULE WITH MECHANICAL CONTRACTOR TO TEMPORARILY SUPPORT LIEBERT PUMP CONTROLLER AND DISCONNECTS FOR PUMPS TO PERMIT ROOFING UNDER EXISTING SUPPORT STAND. CONTROLLER AND ONE PUMP MUST REMAIN IN OPERATION DURING WORK.
- 6 COORDINATE AND SCHEDULE WITH MECHANICAL CONTRACTOR TO TEMPORARILY SUPPORT EXISTING POWER AND CONTROL CONDUITS WHILE MECHANICAL CONTRACTOR REMOVES EVERY OTHER PIPING SUPPORT TO PERMIT ROOFING. RESTORE ALL CONDUIT SUPPORTS AT COMPLETION OF PROJECT PIPING SUPPORT.





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Project Title
STRATTON VAMC
RESPIRATORY THERAPY ROOF

Location
STRATTON VA MEDICAL CENTER

Date

5/5/14

Project Number
528A8-14-803

Building Number
BLDG. 1

Drawing Number

F100

Dwg. 7 of 7

Office of
Construction
and Facilities
Management

Department of
Veterans Affairs